



VLF 6

Vertical Clean Air Laminar Flow Cabinet



Operators Manual

Issue 03 – October 2010



CE Marking certifies that this equipment conforms to the following
EEC directives: -
Low Voltage Equipment – 72/23/EEC & 93/68 EEC
Electromagnetic Compatibility – 89/336/EEC

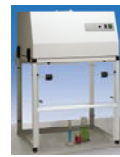


Certificate No: 0954499



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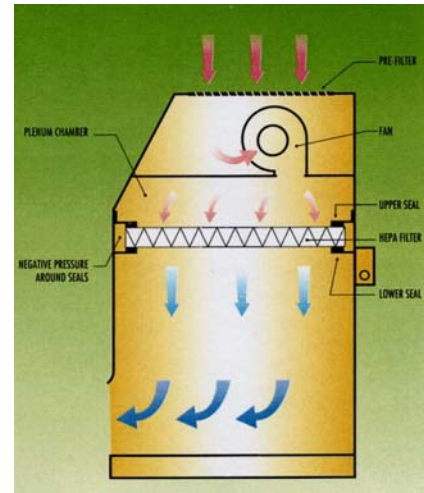


INTRODUCTION

The Airflow is drawn through a Pre-filter on the top of the cabinet through the fan to a plenum chamber behind the Main filter. The air then passes through the filter at the top of the Cabinet and out of the working aperture.

The filter seals are maintained under a negative pressure so that it is not possible for unfiltered air to pass the seal into the Cabinet.

Airflow is considered laminar between 0.35 to 0.55 m/sec.





INSTALLATION AND OPERATION

The unit will be supplied ready assembled and with the correctly fused mains 3 pin plug fitted. The unit can only be connected to the mains supply as follows:

Brown - 220/240V, Blue - Neutral
Green/Yellow to Earth

IMPORTANT **THIS APPLIANCE MUST BE EARTHED**

OPERATION

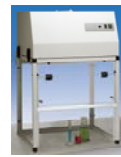
The cabinet is fitted with the following controls and instrumentation:

- a) Mains on/off rocker switch
- b) Lighting switch on/off
- c) Fan high/low speed rotary switch

The unit is started by switching on the mains rocker switch and the light switch.

NOTES

- 1 Bunsen burners **MUST NOT** be placed within 200mm of the glazing or 'HEPA' filter, the flame kept below 100mm high and **MUST NOT** come into contact with the back or roof of the cabinet which could damage the HEPA filter.



FILTERS

PRE-FILTER

The pre-filter is mounted on the top of the cabinet and will require occasional replacement. The filter grade is EU7.

To change pre-filters:

- 1 Switch off the mains power supply.
- 2 Remove both thumbscrews on the head of the cabinet.
- 3 Slide top panel backwards 30mm (approx) to disengage rear overlap and remove top panel.
- 4 Replace pre-filter. NOTE: the filter is graded and should be installed with coloured surface uppermost.
- 5 Replace top panel on head unit 30mm (approx) to the rear. Slide panel forwards with top panel **under** the rear overlap.
- 6 Replace thumbscrews.
- 7 Switch on mains power supply.

MAIN FILTER

The main filter is mounted from the top of the cabinet and the seals are under negative pressure to avoid leakage into the cabinet. The filter is 99.997% efficient against 0.3 micron particles.

To replace the main filter, disconnect light lead at rear, unlock the side latches and lift off the head unit.



AIRFLOW

The airflow is preset and not adjustable. If the airflow drops below 0.3M/sec change the airspeed switch to high. This will extend the life of the filter.

AIRFLOW MONITORING

The airflow should be checked at 6 monthly intervals with a rotary vane anemometer, at a distance of about 100mm from the filter face. Adjust the airspeed if it is outside the above levels. (Please check/replace the pre-filter prior to checking the airflow).



SERVICING

An annual service is recommended and will cover the following points:

- a) Airflow check.
- b) Replace pre-filter if required.
- c) Filter condition check by D.O.P.
- d) Inspection of electrical components, lighting, cables etc
- e) Cleaning and checking the condition of the glazing
- f) Examination of services if fitted. The gas supply line must be checked carefully for leaks and damage is fitted
- g) Issuing of a test report complete with an airflow certificate

Labcaire have a national team of service engineers who can offer a comprehensive service at very competitive rates on all types of equipment from air purifiers and fume cupboards to safety cabinets and to clean rooms.

Should you require further details please fill in the enclosed form and return it to us marked for the attention of our Customer Services Department.



MAINTENANCE

WARNING - Removal of the panel will expose electrical contacts. Disconnect electrical supply before opening.

- a) FILTERS - The pre-filter requires occasional replacement.
- b) AIRFLOW - The Airflow will require checking at routine intervals. See section on Airflow.
- c) LIGHTING - The lighting is accessible from back of the Cabinet. The units are complete with starter and choke.



FAULT FINDING - ALL MODELS

WARNING 240v - ONLY QUALIFIED PERSONNEL TO CHECK ELECTRICAL CIRCUIT AND COMPONENTS

1 Unit will not switch on fan or lighting circuit.

- Check:
- A - Main fuse in plug and that electricity is turned on at the mains switch.
 - B - The fuse in the head unit adjacent to the mains inlet cable.
 - C - Condition of mains inlet cable.

2 Lighting fault.

- Check:
- A - Starter switch inside the light assembly (see section on maintenance).
 - B - Replace fluorescent tube inside the light assembly.

3 Fan off but lights on.

- Check:
- A - SWITCH OFF - Allow unit to cool (if warm) and restart. If fan now starts then the thermal overload in the fan has been tripped.
 - B - Failure of fan or fan capacitor - contact **LABCAIRE** for replacement items.

4 Low airflow alarm - (optional)

4.1 Warning light does not come "on" at start up, with unit turned on:

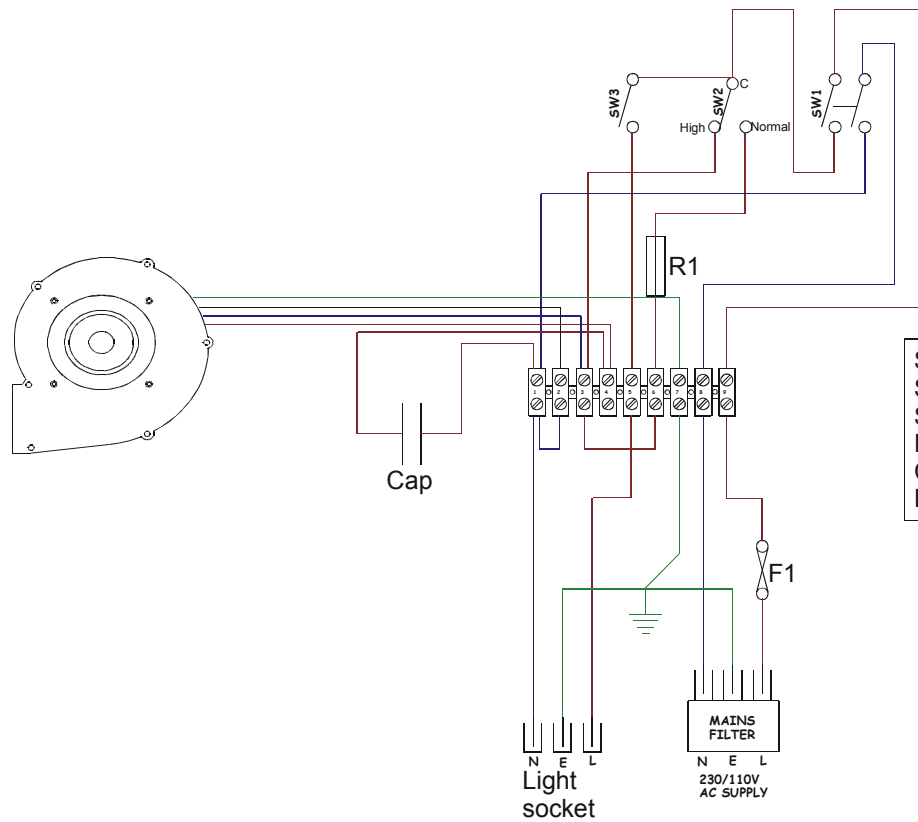
- Check:
- A - Calibration
 - B - Indicator lamp

4.2 Warning light does not "go off" at all after start off:

- Check:
- A - Fan Failure
 - B - Calibration

4.3 Warning light comes on, goes off and then comes on and flickers on start up:

- Check:
- A - Condition of filters
 - B - Calibration of pressure switches



SW1 = Mains sw't
 SW2 = Fan high/low sw't
 SW3 = Light sw't
 F1 = 3A @ 230V (6.3A @ 110V)
 CAP = 5uF @ 230V (10uF @ 110V)
 R1 = 120R @ 230V (15R @ 110V)

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Puricore International Ltd

175 Kenn Road, Clevedon, North Somerset, BS21 6LH England

UK Tel: (01275) 793000
INT Tel: +44 1275 793000

UK Fax: (01275) 341313
INT Fax: +44 1275 341313

E-mail: labcaire@puricore.com

Website: <http://www.puricore.com>

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